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10/666,878

09/19/2003

Evan E. Koslow

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EXAMINER

FORTUNA, JOSE A

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/666,878
Filing Date: September 19, 2003
Appellant(s): KOSLOW, EVAN E.

Kelly M. Nowak
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 17, 2008 appealing from the Office action mailed October 16, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,929,502	GIGLIA	05-1990
5,817,325	SAWAN et al.	10-1998
5,681,468	SAWAN et al.	10-1997

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6,406,594

PALMER et al.

06-2002

Celanese Acetate, "Complete Textile Glossary," 2001, Celanese Acetate LLC, pp. 97

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4-7, 9-12, 20, 22, 24 and 42-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giglia, US Patent No. 4,929,502 in view of Sawan et al., US Patent Nos. 5,817,325 or 5,681,468.

Giglia teaches an integrated paper comprising fibrillated fibers and a particle immobilized therein, see abstract. Giglia teaches that the paper can be formed using the wet lay technique, resulting in a novel absorbent fabric, having a caliper between of at least 0.005 inch, high absorptive capacity to weigh ratio and high porosity to fluid flow, column 6, lines 38-44. Giglia also teaches that the paper can be used to make filters or combined with another filter surface, e.g., a carbon block, column 7, lines 14-22. Giglia teaches the same type of fibers as claimed and the same particles including the size of such particles, column 6, lines 33-37. Giglia teaches the use of particles either to adsorb toxic gases or as microorganisms control and teaches the use of activated carbon particles as the preferred particles. Even though Giglia does not teach the pore size of the paper as claimed, this property seems to be inherent to the paper taught by the reference, since they are made using the same process and using the same raw materials as claimed, or at least the minor modification to obtain the pore size in the range as claimed would have been obvious to one of ordinary skill in the art as an optimization of a result effective variable. Note that it has been held that “[T]he discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. *In re Antoine*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); *In re Aller*, 42 CCPA 824, 220 F.2d

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454, 105 USPQ 233 (1995).

Giglia teaches the filter medium including the integrated paper as claimed. However, he fails to teach the interception-enhancing agent as claimed. However, Sawan et al., in both Patents, teach the same interception enhancing agent, see the US'325, column 8, lines 45-68 and US'468, column 7, line 64 through column 8, line 36. Sawan et al. teach the advantages of using such interception agents, i.e., the formulation kills microorganisms on contact without leaching from the matrix, see abstract of the US'325 and columns 7-8 of the US'468. Therefore, using the interception agents as taught by Sawan et al., in both patents, as the antimicrobial agent on Giglia et al. filter medium would have been obvious to one of ordinary skill in the art in order to obtain the advantages discussed above.

Moreover, one of ordinary skill in the art would have reasonable expectation of success if the antimicrobial agents taught by Sawan et al., both patents, were used as antimicrobial agents on Giglia et al. filter/membrane. Note that Giglia et al. teaches the use of antimicrobial agents on theirs filter medium and it has been held that “[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is unnecessary.” In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 152 USPQ 618 (CCPA 1967).

Claims 2-3, 14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giglia, US Patent No. 4,929,502 in view of Sawan et al., US Patent Nos. 5,817,325 or 5,681,468 as applied to claims 1, 4-7, 9-12, 20, 22, 24 and 42-47 above, and further in view of “Complete

Textile Glossary” by Celanese Acetate LLC¹.

Giglia’s invention has been discussed above. Giglia fails to teach the use of lyocells as the synthetic fibers used to make the paper(s). However, the Celanese publication above teaches the benefits of using lyocells for making porous webs, e.g., Lyocell fiber is suitable for blending with cotton or other manufactured fibers. Because of its molecular structure, lyocell has the tendency to develop surface fibrils that can be beneficial in the manufacture of hydroentabled and other nonwovens, and in specialty papers. For apparel uses, the fiber’s unique fibrillation characteristic has enabled the development of fabrics with a soft luxurious hand. The degree of fibrillation is controlled by cellulose enzyme treatment. Therefore, the use of such fibers, lyocell fibers, to substitute the synthetic fibers, specifically the acrylic fibers taught by Giglia, would have been obvious to one of ordinary skill in the art in order to obtain the benefits indicated above. Note that one of ordinary skill in the art would certainly recognize the easiness of the fibrillation of the lyocells fibers and the environmental friendliness of the lyocells fibers as oppose the synthetic fabrics suggested by Giglia. Moreover, it has been held that “[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is unnecessary.” In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 152 USPQ 618 (CCPA 1967).

¹ Only the pertinent page has been attached. However, the entire reference in PDF format can be downloaded from: <http://www.vectranfiber.com/fiberdictionary.pdf>.

(10) Response to Argument

Applicant's arguments filed on April 17, 2008 have been fully considered but they are not persuasive.

Applicant argues that the secondary reference(s) does/do not teach the precipitation of the interception agent on at least portion of at least some of the fibers as it is claimed, but the reference(s) teach/teaches a contact-killing, non-leaching coating on the surface of an article. Also, applicant argues that the precipitation of additives onto papermaking fibers is only known for the precipitation of calcium carbonate and the claimed precipitation would not have been obvious to one of ordinary skill in the art. Applicant arguments have been considered unconvincing for the following reasons:

- As the onset of the discussion, it is important to note that the claims are drawn to products and products are evaluated by their properties, not by the way they are made. Since the combination of the references produces a paper that has all the additives and raw materials of the claimed paper, even if the additives are added in other faction, which it is not necessarily true, see arguments below, then the product taught by the reference reads on the claimed paper, specially when it has not been shown that the properties of such products are different. Note also that the claims use the phrase the precipitant is formed on “at least portion of said...” which reads on the whole thing or a very minute portion of the fibers and therefore, the coating of the fibers with the precipitate is within the scope of the claims, as well as just producing, forming, a speckle of the precipitant on the fibers.

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- Moreover, it is the examiner contention that the secondary references teach that the contact-killing agent could be precipitated onto the fibers, and coating is a preferred embodiment, or at the very least the reading of the secondary references suggest to one of ordinary skill in the art that such additive could be precipitated on the fibers, specially when the *in situ* precipitation of additives is known in the art, see discussion on the next bullet-section, below. Note that Sawan et al. teach that adding the interception agent can be done either by producing it, i.e., making it first, and then adding to the substrate or can be formed *in situ* in the substrate, see for example, column 4, lines 11-19 of the US'325 or column 4, lines 18-24; column 9, lines 16, of the US'468, where they specifically teach that the article is first contacted with the carbonyl compound and then contacted with a metal salt solution as to deposit the metal on the surface of the article, reproduced for below, (EMPHASIS ADDED).

“In methods of the invention a surface and pores of a filter are coated with a metal. In one embodiment, a filter having pores is provided, ***the filter is contacted with a carbonyl compound, the filter is dried, and the dried filter is contacted with a metal salt solution or metal carboxylate salt solution and an amine-containing compound solution so as to deposit the metal on the surface and within a plurality of the pores.*** In one embodiment, this filter is then washed and dried. The filter can be any of the filters described above.”

It is clear from the teachings that deposition of the metal, refers to the precipitation of the metal in the surface of the article or within its pores. The latter is more clearly taught by the US'468 on column 9, lines, 34-41, reproduced below, which teaches that the carbonyl compound acts as a reducing agent, so that the metal ion is reduced to the metal, i.e., precipitates, (EMPHASIS ADDED):

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“The carbonyl compound acts as a reducing agent, so that the metal ion is reduced to the metal, e.g., silver ion is reduced to metallic silver. This electroless redox reaction occurs in situ in solution or in the solid state. The carbonyl compound has affinity for aqueous and non-aqueous phases and therefore can be used in the process of coating either hydrophilic or hydrophobic filters.”

- With respect to the arguments that the precipitation of additives onto papermaking fibers is only known for loading the fibers with calcium carbonate, the examiner respectfully disagrees. While it is true that it is very common to precipitate calcium carbonate on the fibers of paper, for chemical and/or economical reasons, the precipitation of other additives are also known, see for example US Patent No. 6,406,594 attached here as an evidence.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/José A Fortuna/

Primary Examiner, Art Unit 1791

Conferees:

Patrick Ryan

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795

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Steven Griffin

/Steven P. Griffin/

Supervisory Patent Examiner, Art Unit 1791